

# **Save the Children (UK) south Sudan Programme:**

## **Water & Sanitation Project Review**

February 2004

Tom Slaymaker

**Water Policy Programme  
Overseas Development Institute**



## Table of Contents

<b>EXECUTIVE SUMMARY.....</b>	<b>3</b>
<b>1. INTRODUCTION .....</b>	<b>5</b>
1.1 BACKGROUND.....	5
1.2 CHANGING CONTEXT: NEW SUDAN OR JUST POST-CONFLICT? .....	6
<b>2. SUPPORTING LIVELIHOODS IN A POST CONFLICT SITUATION .....</b>	<b>8</b>
2.2 CONCEPTUALISING LIVELIHOODS SUPPORT .....	9
2.3 WATER AND LIVELIHOOD SECURITY .....	14
<b>3. PROJECT PROGRESS &amp; SECTOR STATUS AND TRENDS.....</b>	<b>17</b>
3.1 SUSTAINABILITY.....	17
3.2 PARTICIPATION.....	21
3.3 INTEGRATION AND COORDINATION.....	23
<b>4. APPROACHES TO DIFFICULT AREAS.....</b>	<b>28</b>
4.1 AWEIL NORTH.....	28
4.2 (BIEH STATE) UPPER NILE.....	30
<b>5. CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>33</b>
<b>REFERENCES .....</b>	<b>35</b>

## List of tables, boxes, figures

TABLE 1: NEW WATER POINTS COMPLETED JANUARY – DECEMBER 2002 .....	17
TABLE 2: NEW WATER POINTS COMPLETED JANUARY-NOVEMBER 2003 .....	18
TABLE 3: COMMUNITY / STAKEHOLDERS MEETINGS JANUARY-DECEMBER 2002 .....	21
TABLE 4: PROJECT AREAS OF OPERATION .....	23
BOX 1 : KEY CHARACTERISTICS OF CRP .....	8
BOX 2: ‘RETURNING THIRSTY’ - LESSONS FROM E RITREA .....	29
FIGURE 1: LIVELIHOODS FRAMEWORK .....	10
FIGURE 2: THREE LEVEL APPROACH TO PROJECT INTERVENTION.....	12
FIGURE 3: HOUSEHOLD WATER ECONOMY .....	15

# Executive summary

The following report builds on a previous detailed technical evaluation of the Save (UK) south Sudan water and sanitation project<sup>1</sup>. The purpose here is to review project progress and wider sectoral developments since the previous evaluation and recommend strategies for dealing with issues and challenges arising. This report therefore focuses less on technical aspects and more on strategic issues facing the project and wider programme.

Section 1 provides some background on the project. It summarises the main issues identified in the previous evaluation and outlines recent ongoing changes in the operating context and implications for the project and wider programme. It suggests that the current operating environment requires a flexible and differentiated strategy focusing on livelihoods support within the wider framework of Child Rights Programming.

Section 2 seeks to define the contribution of water and sanitation interventions in support of livelihoods in post-conflict situations. A livelihoods approach essentially promotes holistic analysis as the basis for improved prioritisation and sequencing of interventions in different sectors/projects. This section outlines the practical implications of adopting a livelihoods approach in project planning and suggests that project interventions are required at three broad levels.

Section 3 provides an overview of project progress and wider sectoral developments and identifies a number of key issues and challenges emerging. Section 4 focuses in particular on difficult areas of operation such as Bieh State and Aweil North. These mini case studies illustrate a number of specific challenges facing the project in such areas and suggest how approaches to tackling them can be integrated within the wider project strategy.

Section 5 presents some strategic recommendations designed to enhance the contribution of water and sanitation interventions to wider programme and organisational objectives.

The review suggests that the project needs to combine interventions at three broad levels: asset-based support; support to structures and processes; and promoting viability through advocacy. Such a framework provides a useful basis for planning project activities and the balance between interventions at different levels can be adjusted in response to changes in the operational context.

Specific recommendations fall into three categories: consolidation of basic asset-based support and extension to new areas; consolidation of support to structures and processes in existing areas; and development of a new strategy for networking and advocacy at higher levels:

## ***Consolidation of basic asset-based support and extension to new areas:***

1. Improve baseline information on water and livelihoods within Save (UK) project areas. Identify linkages between water availability, access and use and livelihood security. Adjust needs assessment and impact monitoring indicators accordingly.
2. Strengthen systems for M&E with a particular focus on the performance of different technologies i.e. frequency of breakdown, average annual maintenance cost etc. Save (UK) should lead by example, establish minimum standards and promote information sharing on issues of sustainability and cost-recovery.

---

<sup>1</sup> Slaymaker & Nicol (2002)

3. Continuation and incremental extension of hand-drilling activities in areas where hydrogeology condition allow with greater emphasis on rehabilitation and operation and maintenance of existing water facilities. Continuation and extension of child-focused HSP activities. Active extension of support to well-digging activities as a low cost alternative technology aimed at wider coverage. Improve coordination among NGOs using contractors and investigate possibility of bulk contracts between NGO consortia and private sector operators.
4. Extension to new areas should only be considered with concomitant increase in project staff and resources. Existing staff are already 'stretched' too thinly and geographic concentration will be increasingly important in order to facilitate effective rehabilitation. The relative 'inelasticity' of the water project must be a consideration in planned expansion of activities in other sectors e.g. education.
5. Greater integration of WSS project indicators and processes of child-focused M&E with those of other projects. Gradual shift away from the current emphasis on discrete sectoral outputs towards a focus on livelihood outcomes within Save UK programme areas.
6. Emergency preparedness and contingency planning. Save (UK)'s comparative advantage in emergency response is limited to existing project locations and adjacent areas, but strengthening contingency planning is a key concern especially in areas where the project may be faced with the prospect of having to deal with large influxes of IDPs.

***Consolidation of support to structures and processes in existing areas:***

7. Training local authorities in identification of water needs and priorities and appropriate technology options. Building capacity to plan and articulate needs to higher levels. Decentralised mapping (payam-level) is a useful tool for participatory planning and increasing transparency in decision-making over resource allocation within the sector.
8. Establish a 'working model' of rural water supply development in Save (UK) project areas for replication in other areas. Document the Save approach and rationale in a manual as a basis for capacity building and training and formation of a coherent policy on rural water supply. Focus on defining roles and responsibilities of different agencies and authorities and seek approval at regional and national levels.
9. It is suggested that the Save (UK) programme pilots a more integrated programme of livelihood support either in an area where it already has an established presence in a number of sectors e.g. Northern Bahr el Ghazal. This option is only likely to be feasible given continued peace and stability which would enable the establishment of more permanent field bases and allow more integrated planning and intervention at field level.

***Development of a new strategy for inter-agency networking and advocacy at higher levels:***

10. It is increasingly important that project work on the ground is complimented with higher level advocacy work to improve inter-agency coordination and to try and influence the development of emerging sectoral institutions and policies. Two possible approaches are identified below.
11. Extension of informal inter-agency networking activities. Save (UK) might take a lead in promoting 'good practice' agreements among agencies working in the water sector. Important issues surround the practicalities of coordination, sharing of information, and the formulation of policy on issues such as cost recovery.
12. Formal secondment of Save (UK) WSS staff to work with either OLS/UNICEF or SRRRC/SPLM in a combined capacity building/advocacy role. Provide technical and strategic advice on the development and implementation of water policy, focusing in particular on building capacity for effective sectoral planning and resource allocation.

# 1. Introduction

## 1.1 Background

The following report builds on a previous detailed technical evaluation of the water and sanitation project<sup>2</sup>. The purpose here is to review project progress and wider sectoral developments since the previous evaluation and recommend strategies for dealing with issues and challenges arising. This report therefore focuses less on technical aspects and more on strategic issues facing the project and wider programme.

The fundamental importance of access to water, as the basis for a clean, healthy and productive life is well-established. Protracted civil war in Sudan has resulted, *inter alia*, in a general collapse of existing systems of water supply development and management in the south. Addressing widespread problems associated with inadequate water supplies and poor hygiene and sanitation remains a priority concern for aid agencies in south Sudan. Save (UK) south Sudan programme recognises the central importance of water and sanitation interventions in support of its core objectives of promoting the health, welfare and development of children. Programme activities are generally designed to assist poor households in rebuilding their asset base in order to reduce vulnerability and improve livelihood productivity. Providing sustainable access to adequate water supplies represents a key component of livelihoods support. Furthermore many of the benefits from WSS interventions accrue either directly or indirectly to women and children. WSS therefore provides a valuable entry point for the realisation of Child Right's Programming objectives.

The previous evaluation found that Save (UK) WSS project interventions to-date have had a significant impact on access to water supplies in project areas. Given the enormous constraints of the operating environment the project was found to have made steady progress in relation to its objectives. While gradually improving, household water security remains a major problem in much of south Sudan and it was therefore recommended that interventions in the area of WSS are continued, enhanced and where appropriate extended. A number of detailed recommendations were made on ways to improve the impact of future project activities and ensure they are appropriate to the livelihoods of the target population. Findings were grouped under three main headings reflecting the major thematic issues facing the project: sustainability, participation and integration & coordination. Subsequent progress in each of these areas is summarised in section 3 but the main purpose of this review is to take a step back and address strategic issues facing the WSS project and wider programme. Specific tasks identified in the terms of reference include:

1. Review project progress and wider sectoral developments since the previous evaluation and outline key issues/strategic challenges arising.
2. Assist in defining strategic contribution of WatSan interventions in the context of wider (changing) country programme objectives.
3. Provide advice to the WatSan team on future strategic directions of the project, addressing issues/challenges identified in (1.), and approaches to difficult areas such as Bieh state.
4. Develop a framework to guide future interventions which is responsive to the changing context on the ground, towards a more integrated approach to supporting livelihood security.

---

<sup>2</sup> Slaymaker & Nicol (2002) Save the Children (UK) south Sudan Programme: Water and Sanitation Project Evaluation. Water Policy Programme, Overseas Development Institute. May 2002.

## *1.2 Changing context: New Sudan or just post-conflict?*

Recent progress in talks between the warring parties<sup>3</sup> has resulted in renewed optimism about the prospects for peace in south Sudan. The current situation is described as 'towards peace'. Donors are warming up to the idea with large sums of money promised once a peace is signed and implementing agencies are assessing the programming implications of the proposed transitional period. The current proposal is for a 6 month pre-interim phase, followed by 6 year 'transition' period. However the process of transition is unlikely to be either smooth or straightforward.

It is generally assumed that it will involve a gradual shift from relief activities towards rehabilitation and development but difficult questions surround how this might be achieved and how quickly. When, for example, is an emergency no longer an emergency and who decides? Is it a technical issue based on empirical evidence (food security, mortality and morbidity, malnutrition etc) that the crisis is over? Or is it essentially a political decision dependent on foreign policy in donor countries? Certainly continued absence of an effective state means that changes in the modalities of aid delivery must be incremental. Even if donors deem emerging government structures legitimate to receive funding, their capacity to absorb funds and deliver goods and services will remain extremely limited for some time. In the interim agencies like Save will continue to fulfil a vital role in the delivery of aid, whether officially earmarked for 'relief' or 'development'.

Important questions also surround likely changes in the operating environment. The security situation on the ground has improved significantly during the past year with relative stability in many areas<sup>4</sup>. However it is widely recognised that things may get worse before they get better. Peace would involve demobilisation and reintegration of large numbers of soldiers and the return of innumerable refugees and IDPs<sup>5</sup>. Managing these processes to ensure they don't result in new conflicts is itself a major challenge. Peace and stability may allow improved access to populations currently affected by conflict, but conflict is not the only obstacle to access in south Sudan - basic infrastructure (roads, power, telecoms) is virtually non-existent<sup>6</sup>. It is hoped however that the cost of using existing access routes (land and air) will be significantly reduced by improved security and stability in the longer term.

The notion of linear continuum from relief through rehabilitation to development is perhaps unrealistic given the complexity and chronic nature of the conflict in south Sudan. Snakes and ladders is probably a better analogy. Common usage of the term 'post-conflict' does not necessarily imply absolute peace. It is very likely that acute crises will persist in small pockets amid a general situation of peace and stability, requiring simultaneous relief and development interventions, contiguous in both space and time. Agency strategies will therefore need to be differentiated and capable of responding flexibly to changing circumstances on the ground. Projected increases in donor funding present an opportunity to both consolidate existing achievements and also to expand the overall programme.

The concept of 'rehabilitation' remains highly ambiguous and controversial. The term implies restoring an assumed pre-existing stable and desirable state of affairs, but part of the reason for the conflict has been the dysfunctional nature of institutions of governance. To restore dysfunction is clearly undesirable and agencies are thus faced with difficult decisions about the desirability and legitimacy of institutions to work with<sup>7</sup>. At the same time reconciliation and (re-)establishing the legitimacy of emerging

---

<sup>3</sup> See [www.justiceafrica.org](http://www.justiceafrica.org) bulletins

<sup>4</sup> See [www.unsudanig.org](http://www.unsudanig.org) security briefings

<sup>5</sup> UNHCR estimates that approx 572 000 Sudanese refugees are currently hosted in neighbouring countries.

<sup>6</sup> World Bank (2003)

<sup>7</sup> Macrae et al (1997)

institutions of governance is critical for a just and sustainable peace. While humanitarians seek to maintain principles of independence, neutrality and impartiality, donors are increasingly guided by political imperatives such as securing 'peace dividends' which tends to focus attention and resources on 'problem areas' rather than 'according to need'. Important questions therefore surround how such donor priorities might be reconciled with Save's own organisational (CRP) objectives.

A fundamental issue facing Save and other agencies is how to move beyond 'humanitarianism' towards (re)building capacity for 'social protection' through provision of key public services (e.g. health, education, water). This implies a shift from simply protecting rights to empowering people to claim their rights by working with and through emerging institutions of governance, and from being accountable primarily to donors to being accountable to the beneficiaries themselves. The term capacity building 'echoes' around OLS but what does it really mean? Should the focus be on individuals or organisations, training or infrastructure development, and what is acceptable in terms of transfer of resources to SRRC counterparts, SPLM and local NGOs? In the context of transition agencies will need to gradually redefine the rules of engagement, both individually and collectively, in order to ensure interventions remain principled.

With increased resource flows coordination of activities (both within and between agencies) will become increasingly important. Improved security, and falling costs of transport, power and communications, present opportunities for both improvements in operational standards and technological advancement. Matching available technologies to the needs and priorities of beneficiary populations is a key challenge. In some areas this will involve consolidating existing technologies while in others upgrading and scaling-up will be necessary, especially in urban areas which are expected to expand rapidly with sustained peace. Agencies like Save will need to assess their comparative advantage in terms of capacity for service delivery in different sectors and define their niche *vis-a-vis* other agencies.

The issue of sustainability is perhaps one of the most controversial in discussions around transition. While it is a well-established goal of development programming, it is by definition incompatible with humanitarian objectives. The lack of any substantial tax base in south Sudan is a serious obstacle to effective service provision. Some aid agencies are already seeking to recover costs for certain (private) services but basic public services will clearly require subsidisation by external agencies for some time yet. Institutional aspects of sustainability are equally important and (re)building the (currently depleted) capacity of local-level institutions is an essential pre-requisite for sustainable transfer of management and financing responsibilities in the longer term. Related to this is the need to engage counterparts on issues of policy development and content as well as implementation. Addressing the current 'policy vacuum' is an important pre-requisite for effective transition, but what opportunities exist for organisations like Save in influencing policy development?

These are just some of the issues and challenges agencies operating in south Sudan are currently grappling with. Securing a sustainable peace is obviously still the first priority but many of the current operational constraints are likely to persist 'post-conflict'. Supporting effective rehabilitation will arguably be more complex than providing relief and will certainly be more expensive. The question is not so much what should be done, but what can be done? Particular effort has been made to ensure recommendations in the following sections are constructive, realistic and feasible given the unique confines of the operating environment and the limited resources available.

## 2. Supporting livelihoods in a post conflict situation

Save UK seeks to define its objectives in terms of Child Rights Programming (CRP):

"Save the Children's aim is to achieve greater benefits for children by operating a coherent programme focused on key children's rights issues."<sup>8</sup>

The rationale for adopting a rights-based approach is well-established and the CRP framework provides an invaluable reference for strategic planning. However, translating these agreed principles into everyday practice on the ground remains a significant challenge, especially in complex situations such as south Sudan.

### Box 1 : Key characteristics of CRP

These key characteristics are drawn from the principles and learning of three main sources:

Child	- from child-centred working
Rights	- from human and child rights
Programming	- from good development practice.

#### Eight key characteristics

CRP will ensure:

1. Maximum **scale and sustainability** of impact from limited resources.
2. **Root causes** are addressed within a broad context
3. **Best interests of the child** are prioritised, including consideration of:
  - the 'whole child', i.e. all aspects necessary for a child's development
  - diversity of childhoods, i.e. variations in experience between children
  - the evolving capacities of children, i.e. the way children's abilities vary over time.

CRP will maximise impact in the following areas:

4. **Changes for children** – children's survival, development and protection.
5. **Participation** and empowerment – children and communities involvement in decision-making and activities that affects them.
6. **Non-discrimination** – equal treatment of all children and active inclusion of the marginalised.
7. **Accountability** – making duty bearers accountable through changes in policy, practice, structures and other mechanisms.
8. Society's **capacity to support children's rights** - e.g. attitudes towards children, movements to support children's rights, institutional capacity to implement improvements.

Source: *Duff et al (2003) Child Rights Programming: A Resource for Planning*

There is currently considerable interest in the potential of rights approaches to inform both relief and development interventions. This reflects a recognition that agencies need to do more than simply supply basic needs if current levels of poverty and vulnerability are to be effectively reduced. This shift is significant but while an increasing number of agencies have formally proclaimed their adherence to 'rights-based approaches' there is often a gap between mission statements and programming realities<sup>9</sup>.

It is important therefore to consider carefully what is feasible and desirable in applying a rights approach. At a strategic level a key priority is building consensus regarding who bears the obligations of ensuring that a given set of rights is upheld. Under international humanitarian law sovereign states are the ultimate duty bearers and in the absence of an

<sup>8</sup> Child Rights Programming (CRP) Handbook, 2002.

<sup>9</sup> Darcy & Hofmann (2003)



effective state there is a clear mandate for others to assume these duties in humanitarian response. However the roles and responsibilities of different agencies in the context of post-conflict rehabilitation and 'transition' are less clear cut and important questions surround how best to engage and at what level.

It is worth noting that even in 'normal' developmental situations there are difficult political choices to be made regarding how to prioritise among an array of unmet 'rights' when budgetary resources are scarce<sup>10</sup>. There may also be trade-offs between satisfying short-term needs and protecting the long-term sustainability of the natural resource base<sup>11</sup>. Experience elsewhere shows that rights approaches tend to emphasise individual rights over collective rights and favour those who have capacity to claim them and while aid agencies clearly have an important role to play in strengthening the 'voice' of vulnerable groups to claim their rights, isolated projects may have only a limited impact in the absence of wider civil society organisation<sup>12</sup>. The particular value of a focus on rights is in drawing attention to social and political relationships which underlie existing disparities, but as such it is inherently political. Important issues therefore surround the capacity of implementing agencies to understand the local political economy and actively engage with political processes at different levels<sup>13</sup>.

The key challenge for agencies is developing an appropriate means of prioritising and sequencing interventions designed to secure rights and it has been variously suggested that livelihoods analysis provides a useful tool. Livelihoods approaches are based on many of the same principles as rights approaches but instead of focusing primarily on access to entitlements they focus on the nature of constraints facing peoples livelihoods. As such they are helpful in identifying which kinds of rights are most important for a particular group at a particular time, or the sequence in which rights should be approached for a particular group<sup>14</sup>.

The following section aims to briefly illustrate conceptually and practically the implications of adopting a livelihoods approach to planning within the project and wider programme. In-depth analysis of livelihoods in project areas is clearly beyond the scope of this short review, instead the aim here is to suggest how such an analysis might be structured.

## *2.2 Conceptualising livelihoods support*

The popular perception of people caught up in complex emergencies as helpless victims dependent on humanitarian aid is perhaps misleading. The aid budget for south Sudan, while substantial, is small in comparison to the scale of the problems faced. It is increasingly recognised that people are mostly forced to survive without aid by coping and adapting their livelihood activities to the circumstances of chronic conflict and political instability. A key question for agencies therefore is how do people manage to survive and to pursue livelihoods amid the day to day stress of coping in an uncertain and violent environment, and how can they be more effectively supported?

Humanitarian agencies operating in protracted emergencies, while primarily concerned with saving lives in the short term, are increasingly interested in protecting and promoting livelihoods in the longer term. Livelihood support is increasingly being conceptualised, not as an end in itself, but as a means by which to achieve the ultimate objective of protecting human, social and economic rights. While the concept of

---

<sup>10</sup> Conway & Norton (2002)

<sup>11</sup> Conway et al (2002)

<sup>12</sup> Significant progress has been made in strengthening the voice of women in recent years but for other groups e.g. children and the disabled progress has been much slower.

<sup>13</sup> Collinson et al (2002)

<sup>14</sup> Conway et al (2002)

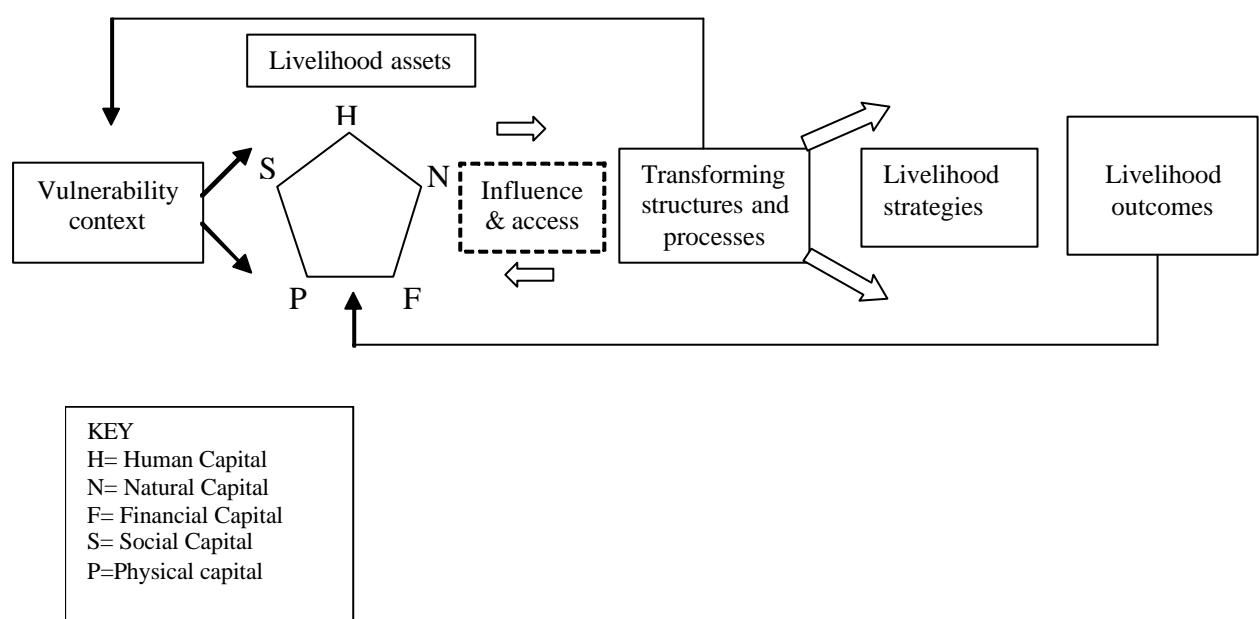
livelihoods programming is attractive practical experience of applying livelihoods approaches in situations of chronic conflict and political instability remains limited<sup>15</sup>. This section aims to outline the practical implications of adopting a livelihoods approach in project planning and suggests that project interventions can be usefully conceptualised at three broad levels.

Livelihoods programming basically requires a deeper level of contextual understanding than conventional humanitarian relief. It demands more holistic analysis (multi-sectoral and multi-level) of factors affecting people's ability to survive and make a living and suggests, for example, that activities like food distribution ought to be complimented by activities designed to address the underlying causes of food insecurity. Important questions surround the extent to which livelihoods approaches are compatible with humanitarian principles of independence, neutrality and impartiality, and understanding of the political economy of conflict is particularly important if livelihoods support is to be both principled and effective.

### Framework for analysis

Livelihoods system analysis is intended to form the basis for improving targeting and prioritisation of project interventions at different levels and in different sectors. Most agencies use variations on the following livelihoods framework:

**Figure 1: Livelihoods framework**



Source: adapted from DFID

The framework is simply a way of looking at how an individual, or household, or community behaves under certain frame conditions. As such it provides a logically consistent means of thinking through the linkages between project interventions and livelihood outcomes, and draws attention to possible constraints.

#### *Vulnerability context*

The vulnerability context refers to the conditions which determine livelihood opportunities. It is typically multi-dimensional and might include, for example, natural

<sup>15</sup> Experience to-date is documented in the recent 'Livelihoods and Chronic Conflict' Working Paper Series [www.odh.org.uk](http://www.odh.org.uk)

(e.g. flood, drought), economic (e.g. price fluctuations) or political (e.g. violence, fighting) dimensions. These include both short term shocks and long term trends and the particular combination varies in different areas. Households are generally unable to influence their vulnerability context.

#### *Livelihood Assets*

Capital assets are those resources that a household is able to make use of. Five broad categories can be identified: natural (e.g. land, water); physical (e.g. infrastructure); social (e.g. kinship networks); financial (e.g. savings, loans); and human (e.g. skills, strength). Political capital (i.e. access to holders of power) is often added as sub-category of social capital. The Household Economy Approach employed by Save (UK) basically involves analysis of the assets available to different households and how they use them to achieve food security. HEA is a useful means of understanding the key determinants of wealth e.g. land, livestock, labour and allows identification of those groups most vulnerable to food insecurity in a given vulnerability context. Food security is at the core of livelihood security and provides a useful proxy indicator.

#### *Structures and processes*

Promoting livelihood security involves focusing attention on those structures and processes which affect access to resources (assets). Structures refer to formal institutions, laws and regulations, and processes are the informal 'rules of the game' which people live by. The war in south Sudan has decimated much of the institutional infrastructure and weakened mechanisms for regulation and enforcement of policy. Nevertheless a range of different formal and informal institutions persist (traditional, political, humanitarian, military etc) each of which influences livelihood strategies in different ways. These structures and processes are likely to change rapidly in the context of transition and aid agencies have an important role to play in ensuring these changes do not adversely affect livelihoods.

#### *Livelihood strategies*

Livelihood strategies in situations of chronic conflict or political instability generally consist of two broad types of activities: *coping* and *adapting*. The balance between the two will depend on the extent to which different groups are exposed to sudden stresses or shocks. Coping activities are short-term responses to periodic shocks e.g. those associated with conflict (violence, displacement) or natural disaster (flood, drought). Adaptive strategies involve more or less conscious and deliberate adjustments to longer term contextual changes/trends. The capacity of different households to cope with and adapt to changing circumstances basically depends on access to resources (assets), this is mainly determined by structures and processes which variously support or constrain livelihood strategies.

Livelihood strategies typically comprise a portfolio of short-term coping and long-term adapting strategies. These combine in different ways in different contexts. While conflict is clearly a major factor influencing livelihood strategies in south Sudan it is often difficult to distinguish between strategies for coping with conflict, and strategies for coping with chronic poverty. Poverty and food insecurity existed in many areas before the conflict and while compounded by the conflict are equally likely to persist post-conflict<sup>16</sup>. In other areas conflict has been the major factor underlying declining income earning opportunities, declining entitlements to resources (e.g. land, water) and increased risk of investment. Understanding the extent to which the current poverty and food insecurity of different groups relates to the conflict is clearly important in order to be able to identify and support vulnerable groups 'post-conflict'.

---

<sup>16</sup> Localised conflicts between neighbouring groups (e.g. over pasture, water, forests) which have been overshadowed by the civil war may well re-emerge and intensify, especially as displaced groups return and herds are restocked.

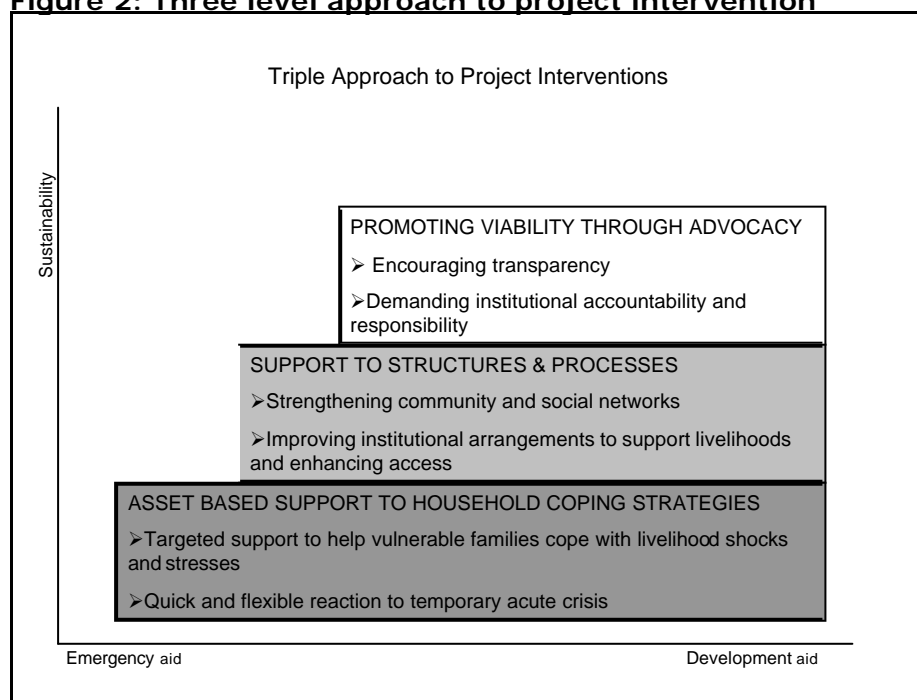
## Implications for project interventions

Livelihoods analysis highlights the complex and dynamic nature of the operating environment. The challenge for the project is to identify 'opportunities' or 'spaces' for intervention within the livelihood system (vulnerability, assets, structures and processes, livelihoods strategies) i.e. which capital assets do people rely on to deal with food and livelihood insecurity in a given vulnerability context and how do structures and processes influence the access of different groups to these capital assets? It is important to be realistic about the potential impact and influence of project interventions at different levels, the question is not so much what should be done but what can be done. In particular how can the allocation of limited project resources produce the greatest net benefit in terms of improved livelihood security?

It is suggested here that in order to provide effective project support to the livelihood strategies of vulnerable households the project needs to combine interventions at three broad levels:

- a) asset-based support
- b) support to structures & processes
- c) promoting viability through advocacy

**Figure 2: Three level approach to project intervention**



Source: adapted from IFSP Triple approach<sup>17</sup>

a) *Asset-based support to household coping strategies*: assisting vulnerable households to cope with shocks and overcome temporary acute crises by strengthening their capital asset base and empowering them to claim entitlements to resources. Protecting existing assets and preventing further depletion of assets and entitlements is the essence of humanitarian relief and is likely to remain important for a long time in large parts south Sudan. Key challenges surround the transfer of responsibility for targeted asset support to emerging government structures.

<sup>17</sup> Korf, B et al (2001) Livelihoods at Risk: Land Use and Coping Strategies of War-Affected Communities in Trincomalee District. Integrated Food Security Programme (IFSP), Trincomalee, Sri Lanka.

*b) Support to structures & processes:* improving institutional arrangements and infrastructure to support livelihood strategies and enhancing access to those institutions. Institutional structures (formal and informal) are instrumental in determining the effectiveness of livelihood strategies of coping and adaptation. Protracted conflict has distorted institutional arrangements and strengthened some at the expense of others with widespread politicisation of organisational objectives and shirking of responsibilities. A crucial question is which institutions should be supported, which will survive 'transition' and which will disappear or be replaced?

*c) Promoting viability through advocacy:* promoting transparency and demanding accountability and responsibility among emerging institutions of governance. (Re)establishing the legitimacy of emerging institutions of governance at local, regional and national levels is a central challenge in ensuring a sustainable peace. Political legitimacy (trust) will depend on their ability to deliver basic services and to allocate resources in a way which is transparent and understandable to all stakeholders. Development of coherent policies and planning processes is an important basis for future development of different sectors.

## 2.3 Water and livelihood security

This section examines the specific contribution of water and sanitation interventions to food and livelihood security, and opportunities for improved integration of the WSS project under an integrated programme of livelihood support.

The principle benefits of improved access to water and sanitation are typically divided into three categories:

1. Health (reduction in water-related disease and improved nutrition);
2. Convenience (time & energy saved); and
3. Economic uses of water (food and non-food income).

Until recently the Save (UK) south Sudan programme has treated water as a health issue and water and sanitation project interventions have focused primarily on potential health benefits e.g. reduced incidence of diarrhoeal disease, especially among children under five who are most vulnerable. However, it was suggested in the previous evaluation that the benefits of well-designed WSS interventions actually extend far beyond health and that it may instead be more useful to treat water as a livelihood issue.

A growing body of livelihoods thinking in the water sector<sup>18</sup> emphasises understanding the ways in which people secure a livelihood as a basic starting point for analysis. As noted in the previous section livelihoods analysis seeks to understand vulnerability<sup>19</sup> in terms of access to and returns to different assets. Water is thus viewed as a key 'productive' asset, which can be combined with other assets not only to sustain life directly but also to bring in the food and non-food income required to sustain livelihoods. The costs and benefits associated with water access therefore need to be understood in terms of their impact on the capacity of households to cope with shocks and stresses and build a viable livelihood strategy. Central to water and livelihoods analysis is a basic understanding of household water economy (see Figure 3).

Water is unique in terms of its life support function and demand for most basic human consumption is essentially inelastic. Various international agencies have attempted to establish minimum standards relating to both quality and quantity<sup>20</sup> but in the context of south Sudan such standards are of limited practical relevance<sup>21</sup>. Firstly actual consumption, even for drinking, cooking and washing, varies enormously, pastoralist groups for example often use as little as 4-5litres per person per day. The severity of water access problems in south Sudan means many people are barely satisfying their most basic consumptive needs. Secondly the relative importance of water quality varies significantly according to context, and water users themselves often prioritise increasing quantity over improving quality<sup>22</sup>. The complex structure of demand for water in these areas cannot be fully explained in terms of health impacts. Instead interveners need to understand impact in terms of costs associated with accessing water (e.g. time, labour) and net gains in livelihood security (reduced vulnerability, increased productivity etc).

---

<sup>18</sup> See for example [www.securewater.org](http://www.securewater.org)

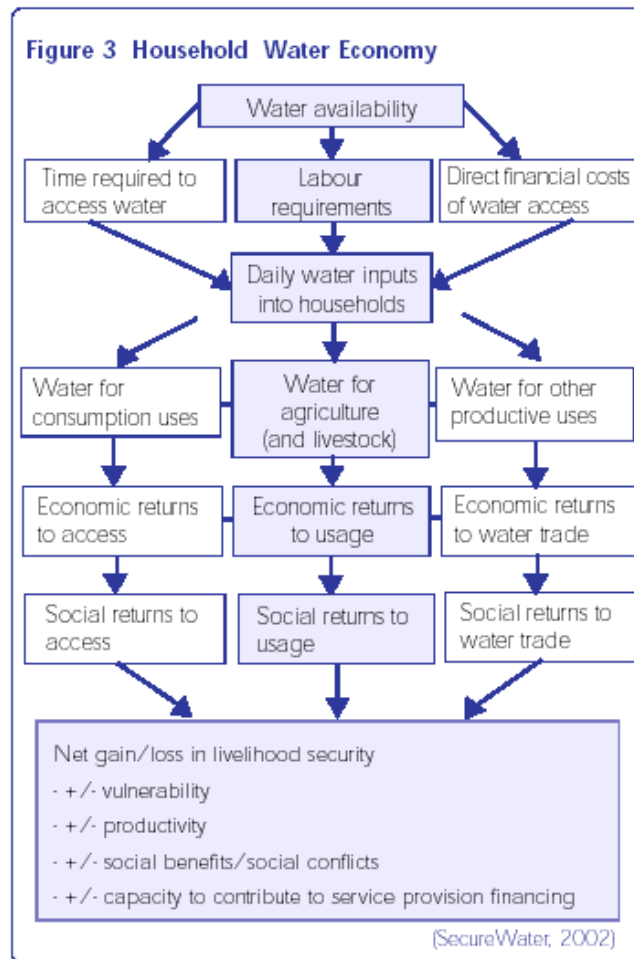
<sup>19</sup> Vulnerability is often directly linked to water access e.g. pastoral communities often identify the most vulnerable groups as 'women and goats' i.e. those who are least able to go for extended periods without water.

<sup>20</sup> See for example Sphere handbook on minimum standards for WSS in disaster response.

<sup>21</sup> Over the years UNICEF and others have attempted to devise a separate set of standards for use in S Sudan.

<sup>22</sup> Slaymaker & Nicol (2002)

**Figure 3: Household Water Economy<sup>23</sup>**



South Sudan is unusual in that people generally don't pay for water<sup>24</sup>. Nevertheless there are social costs associated with different access regimes e.g. in pastoral areas costs and benefits are tied up in rules regarding access and systems of reciprocity. The dominance of pastoral and agro-pastoral traditions in south Sudan means that populations have always been very mobile. Access to water remains a central determinant of population movement, particularly in semi-arid areas, and has historically been a source of conflict between pastoral and agro-pastoral groups. Understanding existing rules surrounding access and use of water resources is a key challenge. Aid agencies must also be wary of the potential negative impacts of 'anchoring' mobile populations and their livestock around new water sources (see Section 4).

The impact of time and energy saved which would otherwise be spent collecting water is frequently stressed by communities in south Sudan. Savings vary seasonally but apply mainly to women and children who are the principal water collectors. For example women in parts of Bahr el Ghazal who previously spent the entire day collecting water in the dry season now report having more time for domestic activities such as cleaning and preparing food, childcare and education, healthcare (particularly important given the absence of formal healthcare facilities and frequency of conflict-related sickness and injury) and animal husbandry. The indirect benefit of these 'reproductive' labour savings on household welfare and coping capacity is often overlooked. It also helps explain why people in many areas continue to use 'convenient' unprotected sources during the wet season, despite the health risks involved.

<sup>23</sup> ODI (2003)

<sup>24</sup> Note the contrast with Save (UK) project areas in Darfur where the principle of payment is well-established.

A few small-scale economic uses of water can also be identified. Agricultural production systems have been severely disrupted in many parts of south Sudan but small kitchen gardens represent an important source of food and non-food income e.g. tobacco, fruit, vegetable gardens etc. Perhaps the single most important livelihood asset in many areas of south Sudan is livestock, a key determinant of wealth, status and food security. Livelihood benefits associated with improved access to livestock watering are obvious, including improved yields (and quality) of meat and milk and increased value of stock. In particular, improved health of smallstock kept within the household is often directly linked with improvements in child nutrition.

Seasonal migration to the 'toic' (lowland swamps) in search of water for livestock is an established livelihood practice in many areas of south Sudan. While migration patterns vary it is predominantly young males who move to temporary cattle camps. Vulnerable members of the household (e.g. women, children, elderly, sick, disabled) typically remain at the homestead. However in recent years lack of access to water during the dry season has forced entire households to relocate in many areas. Household water security is thus a key factor in reducing migration-related vulnerability (see Section 4.2) and also contributes to Save UK's wider child protection and education objectives.

Water and livelihoods analysis therefore shows that improved access to water in south Sudan is not only a health issue but is a key determinant of food and livelihood security. Household coping and accumulation strategies depend heavily on the labour availability and time and energy saved collecting water can be reallocated to both productive (labour resulting in food or cash income) and reproductive uses (childcare, domestic activities etc). Water and livelihoods analysis also provides important insights into the distribution of costs and benefits associated with access to water. While the potential health benefits (e.g. reduction in water-related disease) of improved access are essentially uniform, the impact on livelihoods often varies significantly.

Household Economy Analysis employed by Save (UK) shows that different wealth groups employ different strategies in order to achieve food security, according to the assets available to them. HEA data shows that the strategies of the poorest and most vulnerable households are often most heavily dependent on their own labour to secure food and non-food income. This suggests that in terms of food security the impact of time spent collecting water (and the benefits of improved access) may be greatest for the poorest and most vulnerable groups. It also suggests that water interventions need to be better integrated with other interventions designed to improve food security.

The realisation of CRP objectives in south Sudan is likely to depend significantly on developing effective means of protecting and promoting livelihoods among the target population. The analysis above shows that access to water is a key determinant of food and livelihood security in south Sudan. Furthermore the benefits of improved access extend far beyond health and contribute to objectives in other sectors/projects including food security, livestock, child protection and education. The potential benefits of WSS project interventions are therefore most likely to be realised in the context of an integrated programme of livelihood support. This implies further integration of WSS with other projects and a gradual shift away from the current emphasis on discrete sectoral outputs, towards a focus on livelihood outcomes in Save UK programme areas.



### 3. Project progress & sector status and trends

Overall project progress over the past 18 months has been encouraging. Project approaches have generally been strengthened following the recommendations made in the previous evaluation and the overall balance of project activities has improved. Progress in terms of implementation has been slower than anticipated due to a combination of factors, mostly beyond the control of the project. These include changes in personnel and associated staff shortages, and late disbursement of donor funds in 2003 (EC HPP funds expected in January were not released until May). Disbursement of funds coincided with the onset of rains in May which delayed procurement of materials for the development of new water sources. Construction activities will recommence as soon as road routes become accessible again (end of November). In the meantime the main focus has been on rehabilitation of existing water points and Hygiene & Sanitation Promotion (HSP) activities. The following section provides a brief overview of progress in relation to issues identified in the previous evaluation and identifies a number of key issues and challenges emerging/remaining.

#### 3.1 Sustainability

The previous evaluation included a number of technical recommendations designed to address physical sustainability issues, in particular ensuring technological approaches are appropriate to the water needs of the target population – including drilling and hand-pump technology options, the development of alternative sources and strategic approaches to hygiene and sanitation promotion.

The project was found to have made some notable progress in this area. Table 1 shows that hand-drilling activities have been consolidated and successfully extended within existing project areas. Hand-drilling remains highly cost-efficient as compared with other drilling technology options and suitable for the majority of project areas. Local authorities highlighted the problem of water access in 'Gok' areas where the water table is too deep for hand drilling. Attempts to formalise ad hoc arrangements with other agencies to cover these areas have met with only limited success (see Section 3.3).

**Table 1: New water points completed January – December 2002**

Name	County	Payam	Boma	Location	No. of house holds	Well Type	Complete date	Depth (m)	Static Water Level (m)	Pump Depth (m)
Ogoidit	Gogrial	Akon	Mayen Pajok	Village	159	Tubewell	Jan 02	33	23	28
Atukuel	Gogrial	Gogrial	Atukuel	School	210	Tubewell	Jan 02	41	31	36
Makol	Gogrial	Alek	Man Kuac	Village	280	Tubewell	Feb 02	37	26	
Keragany	Gogrial	Gogrial	Mandeng	Village	161	Tubewell	Feb 02	45	38	40
Pagai school	Aweil E	Madhol	Pagai	School	150	Tubewell	Jan 02	21	10	15
Majak Paliel	Aweil E	Malualbai	Ameth	School	100	Tubewell	Jan 02	28	19	27
Rumrol	Aweil E	Madhol	Rumrol	School	100	Tubewell	Feb 02	30	21	29
Wunnyor	Gogrial	Akon	Mayenpajok	Village	154	Tubewell	Mar 02	32	23	28
Mabior-yar	Gogrial	Toch	Majaknyuom	Village	145	Tubewell	Mar 02	3	1	2
Yiar	Gogrial	Alek	Mankuac	Village	186	Tubewell	Mar 02	41	12	38
Mobil	Aweil E	Malual Bai	Malual Bai	School	135	Tubewell	Mar 02	24	13	21
Kekeme 2	Wau	Kuajina	Kuajina	Village	45	Hand dug	Mar 02	12	6	11
Riang kou	Aweil s	Mangargie	Thanybur	Village	38	Tube well	Apr 02	28	20	19 ½
Leek	"	Gakrol	Mathiang	Village	86	"	Mar 02	38	12	26
Wuncuei	"	Gokrol	Adol	Village	41	"	Mar 02	30	15	28
Jarajiep	Aweil s	Gakrol	Gakrol	Village	43	"	April 02	36	16	27
Linggier	Aweil s	Gakrol	Mathiang	Village	125	"	Sept 02	24		15
Wathmok	Aweil s	Wathmok	Wathmok	Village	63	"	Aug 02	30		18
Riamwak	Aweil s	Magargier	Thanybur	Village	59	"	Jun 01	29	14	22
Panliet-kou	Gogrial	Riau	Panliet	Village	150	Tube well	Jun 02	41	15	30
War-rou	Gogrial	Riau	Panliet	Village	140	Tube well	Jun 02	45	12	30

Name	County	Payam	Boma	Location	No. of house holds	Well Type	Complete date	Depth (m)	Static Water Level (m)	Pump Depth (m)
Amerdit	Gogrial	Gogrial	Maliul-ajak	Village	198	Tube well	Jun 02	51	42	48
Ajuaja	Gogrial	Akon	Akon	Village	164	Tube well	Jun 02	18	8	15
Ayii	Gogrial	Akon	Akon	Village	130	Tube well	Jul 02	21	10	19
Panngap	Gogrial	Akon	Akon	Village	105	"	Jul 02	19	7	15
Mayen ajuaja	Gogrial	Akon	Akon	Village	149	"	Jul 02	17	9	15
Juer	Gogrial	Akon	Akon	Village	139	"	Sept 02	18	8	15
Mayenjur	Gogrial	Toch	Nyang	Village	475	B/hole	Sept 02			
Mayenjur	Gogrial	Toch	Nyang	Village	180	B/hole	Sept 02			
Audou	Gogrial	Riau	Panliet	Village	150	Tube well	Nov 02	39	29	36
Nyoric	Gogrial	Kuajok	Kuajok	Village	175	Tube well	Dec 02	19	5	18
Guo	Gogrial	Kuajok	Keric	Village	245	Tube well	Dec 02	21	9	15
Nyor	Gogrial	Kuajok	Angui	Village	124	Tube well	Dec 02	21	9	18
Rual	Gogrial	Akon	M-pajok	Village	150	Tube well	Dec 02	26	16	25
Thurgumel	Gogrial	Riau	Panliet	Village	130	Tube well	Dec 02	33	25	30
Nyadin	Zaraf	Mareang	Nyadin	School	80	HD well	Nov 02	5	2	N/A
Koartjiath	Zaraf	Mareng	Koartjiath	School	58	HD Well	Dec 02	5	2	N/A
<b>Total House holds reached</b>					<b>5,222</b>					

**Table 2: New water points completed January- November 2003**

Name	County	Payam	Boma	Location	No. of house holds	Well Type	Complete date	Depth (m)	Static Water Level (m)	Pump Depth (m)
Mabior Koc	Gogrial	Gogrial	Mandeng	Village	180	Tubewell	09/01/03	51	32	38
Magarthii	Gogrial	Akon	Mayen pajok	Village	200	Tubewell	12/01/03	24	12	22
Akoukeer	Gogrial	Akon	Mayen pajok	Village	159	Tubewell	25/01/03	24	14	22
Abaga 1	Gogrial	Alek	Mankuac	Village	105	Tubewell	15/01/03	31	20	30
Thurgumel	Gogrial	Riau	Panliet	Village	130	Tube well	23/12/03	42	25	36
Tobalang	Gogrial	Toch	Majaknyuom	Village	157	Tubewell	04/01/03	38	27	30
Ajogo	Gogrial	Toch	Majaknyuom	Village	200	Tubewell	12/01/03	25	16.5	18.5
Lablab	Gogrial	Alek	Athokpur	Village	100	Tubewell	28/02/03	40	30	39
Baga 2	Gogrial	Alek	Mankuac	Village	100	Tubewell	28/02/03	30	20	27
Malek jok	Gogrial	Alek	Mankuac	Village	200	Tubewell	10/02/03	30	20	27
Gortak	Gogrial	Alek	Alek	Village	150	Tubewell	20/02/03	20	10	15
Rual wul	Gogrial	Kuajock	Agui	Village	162	Tubewell	07/03/03	21	9	18
Yoyo	Gogrial	Gogrial	Gogrial	Village	109	Tubewell	01/03/03	45	28	42
Women cent	Gogrial	Aon	Akon	W/Centr	150	Tubewell	30/04/03	12	4	10.5
Nyok-Kajok	Gogrial	Akon	Akon	Village	75	Tubewell	25/07/03	16	8	15
Dandak	Gogrial	Akon	Akon	Village	73	Tubewell	14/11/03	28	18	27
Rumkulek	Gogrial	Akon	Akon	Village	105	Tubewell	25/11/03	35	10	34
Nyigung	Gogrial	Alek	Alek	Village	150	Tubewell	05/05 /03	27	24	No
Panacier	Gogrial	Toch	Panacier	School	100	Tubewell	10/05/03		4	
Bullanlion	Aweil s	Mangargi	Thanbur	Village	75	Tubewell	25/03/03	29	20	22
Panadhoth	Aweil s	Wathmuok	Man Kuac	Village	95	Tubewell	15/02/03	22	10	15
Bulanhom	Aweil s	Mangargier	Thanybur	Village	57	H/D/well	08/07/03	10	6	4
Moglibi	Wau	Kuajiena	Alur	Village	100	H/D/Wel	June 03	10.5	6	9
Gugo	Wau	Kuajiena	Alur	Village	60	H/D/Wel	May 03	13	4	13
Kekeme	Wau	Kuajiena	Kuajiena	Village	35	H/D/Wel	11/04/03	11	8	9
Nyadin 2	Zeraf	Mareang	Nyadin	School	120	H/D/Wel	April 03	6	3	-
Toch	Zeraf	Mareang	Toch	School	80	H/D/Wel	Jan 03	6	3	-
<b>Total Households reached</b>					<b>3227</b>	<b>Developed wells</b>		<b>26</b>		

The table shows steady progress but there has been no apparent change in the balance between drilling and digging activities since 2002. Extension of support to well-digging, where hydro-geological conditions permit, remains a key recommendation. To this end the team has been developing innovative lining materials using heavy duty plastic manufactured in Nairobi. It has also successfully trained SRRC teams in use of these materials through a demonstration in Aweil South. Two further SRRC teams have also been trained in Zeraf island where the water project is providing water and sanitation facilities to Save UK supported schools. Five hand dug wells have been developed using the heavy duty plastic liners in Zeraf and Aweil South counties. Performance of these new materials requires careful monitoring and modification as appropriate (it has already been suggested that plastic well liners need to be thicker and that the design of plastic covers requires substantial modification). Successful adaptation is crucially important in order to build confidence among beneficiary communities in these more appropriate technologies as compared to hugely expensive boreholes.

It is further suggested that the feasibility of rehabilitating deep brick lined wells constructed in the 1950s and 1970s be investigated. This could present a highly cost-effective means of increasing access to water in areas where the water table is too deep for hand drilling e.g. parts of Upper Nile and Aweil North (see Section 4). For deeper wells this is likely to require specialist equipment e.g. tripod and harness and oxygen pump. In many areas the immediate priority in terms of supporting livelihood coping strategies is increasing the quantity of water available. Low-tech options represent far better value for money and enable greater coverage given limited resources. Furthermore, if well-designed, these can always be upgraded in future as appropriate.

Perhaps the most notable recent improvement is in the area of Hygiene & Sanitation Promotion (HSP). This was identified as an area of weakness where the project has been ineffective in the past. In 2002, the WSS project commissioned a consultant to provide strategic advice on HSP<sup>25</sup>. The project team has subsequently formulated some simple HSP messages, developed a set of learning materials and trained a number of hygiene and sanitation 'motivators'. Children represent a key entry point for disseminating HSP messages and overcoming various taboos that surround discussion of sanitation issues in project areas. Hygiene and sanitation clubs have been formed in schools as a means of disseminating health messages. Pupils are also involved in construction of latrines through the use of demonstrations, role plays and hygiene related songs.

The technique of simultaneous targeting of teachers, pupils, PTAs and community members for training as HSP 'motivators' is an effective means of reinforcing messages at different levels. Current HSP activities were found to be generally well organised and well thought out. Discussion with different groups of motivators revealed some encouraging progress (e.g. construction and use of latrines) but it should be recognised that affecting behavioural change takes a long time. As such it requires long term commitment to HSP and regular 'refresher' activities. A key challenge is to establish HSP as an integral part of the school curriculum, taught by local teachers, rather than an 'add on' taught by WSS project staff. The project is targeting teachers in an effort to mainstream HSP within the regular curriculum but for the time being most remain dependent on the project for continued support.

Monitoring and evaluation remains a key area of weakness within the project. This applies both to water point construction and operation and maintenance. The project has recently recruited a number of new Project Assistants to address these issues but in order to be effective they will require dedicated training. This should be treated as a high priority as any serious future discussion of sustainability issues requires detailed information on the appropriateness of different technologies e.g. dates installed versus dates repaired, frequency of breakdown and average annual maintenance costs etc. This

---

<sup>25</sup> Hygiene and sanitation consultancy report 2002

is particularly important in order to be able to compare the performance of the Afridev pumps currently being piloted in Gogrial county, against the standard IM2. Ultimately this information needs to be fed back into discussions with local authorities and communities on technology choice and cost recovery.

The issue of cost recovery remains highly controversial in the water sector. Cost recovery has previously been attempted in the livestock sector but with limited success<sup>26</sup>. It is even more difficult to recover costs for public goods like water supplies. In the south Sudan context user groups are often hard to define and 'tax' and the capacity of local authorities for regulation and financial management is extremely limited. Crucially, there is simply insufficient information available on the actual costs of maintaining different technologies and the capacity of the population to pay. The first priority is to document actual costs of O&M in order to inform more serious discussion with communities and local authorities on these issues. Institutional aspects of sustainability are equally important and (re)building (currently depleted) capacity of local-level institutions is an essential pre-requisite for sustainable transfer of management and financing responsibility in the longer term.

---

<sup>26</sup> While the principle of cost recovery is well-established serious obstacles have been encountered due to financial mismanagement.

## 3.2 Participation

The previous evaluation focused on institutional aspects of sustainability under the broad thematic heading of participation. In particular it focused on issues surrounding involvement of beneficiary communities (especially women and children) in project planning and implementation, and working with and through local decision-making authorities (traditional, political and humanitarian). A range of recommendations were made designed to improve community mobilisation and build the capacity of counterparts to take greater responsibility for WSS sector development.

The project has continued to make steady progress in this area. Stakeholder participation in decision making around water needs and priorities for allocation of project resources is a key strength of the Save (UK) water and sanitation project. Table 3 provides a summary of recent project consultation meetings. Minutes kept for these meetings show that these have been well attended by a generally representative cross section of the local community.

**Table 3: Community / stakeholders meetings January-December 2002**

County	No. of meetings	Attendance			Total
		Men	Women	Children	
Gogrial	5	483	18	12	512
Aweil South	13	397	104	193	6994
Aweil East	3	355	70	22	447
Wau	4	110	70	54	234
Zeraf	7	248	179	174	600
<b>TOTALS</b>	<b>32</b>	<b>1,593</b>	<b>439</b>	<b>455</b>	<b>2,687</b>

While consultation meetings go a long way towards improving transparency and accountability in decision making it is suggested that this could be further strengthened through the use of maps. Maps are an extremely valuable planning tool, easily understandable even for low-literacy groups, and a good basis for making decision-making on resource allocation more transparent. The production of detailed payam-level maps showing different types of existing water points is an important starting point for discussion of priority areas and appropriateness of different technology options available. Maps can be updated regularly, reproduced and distributed to different stakeholder groups. This is also a useful means of managing expectation among beneficiary communities which is a persistent problem in south Sudan.

Community mobilisation remains a major challenge in the south Sudan context, especially in so-called 'difficult areas' (see Section 4). The project currently requires communities to provide food and accommodation to support the SRRC WES teams during the process of installation. The recent development of pre-project agreements with beneficiary communities appears to have been helpful in clarifying the roles and responsibilities of each party and reducing misunderstandings and disagreements at local level. However a key challenge for the project is ensuring these agreements are recognised and respected by higher level authorities. The lack of any coherent policy framework for water sector development is a constraint. However, there exists an opportunity to influence the future development of policy by developing and documenting a 'working model' of good practice in Save (UK) project areas. The Save (UK) project has the potential to influence others and achieve greater leverage over future policy development by 'leading by example'.

Significant improvements were also noted in incentives provided to SRRC WES teams (bicycles, boots, overalls, blankets, mosquito nets etc). Another key recommendation was the development of standardised guidelines to improve methods of pump installation and water point design. The project has made some progress here with 'refresher' training for WES teams and greater provision for rehabilitation of existing points using

standardised OLS design. However no significant improvements were noted in the small sample of water points observed<sup>27</sup>. It is suggested that the principles of design, operation and maintenance are clearly documented in a diagrammatic manual. This could then form the basis for training of both WES teams and project assistants and provide a benchmark for monitoring adherence of minimum standards in design and care and maintenance of water points.

Participation of women and children is a key concern within the project and wider programme and a major challenge in the south Sudan context. Attempts have been made to address the gender balance of the project team but recruiting female staff with the requisite technical skills has proven difficult, this is typical of a wider problem within the water sector. On the beneficiary side the project is seeking greater involvement of women on water committees, and experimenting with training women as water point caretakers. This should be regarded as a positive development although 'one off' training in the basic principles and rationale of water point O&M is generally insufficient. Regular follow-up and monitoring by project assistants is essential. However, WSS project resources remain relatively thinly spread over a wide area which is a significant constraint to M&E.

As already noted child-focused HSP has the potential to become a major strength of the project. The project has successfully secured the participation of significant numbers of hygiene motivators in disseminating HSP messages. This is encouraging but the real measure of participation must be behavioural change and this is only likely to be achieved if motivators themselves lead by example.

---

<sup>27</sup> It should be noted that flooding during the field visit meant access to project areas was severely restricted.

### 3.3 Integration and coordination

Integration and coordination was found to be a key area of weakness in the previous evaluation. Major challenges remain in this area and are dealt with below under three headings: intra-agency coordination, inter-agency coordination and institutional capacity issues.

#### ***Intra-agency coordination***

Opportunities for improved intra-agency coordination through a more integrated programme of livelihood support are summarised briefly in Section 2. At present linkages between sector projects remain largely ad hoc although some bilateral linkages e.g. water and education<sup>28</sup>, and education and protection are increasingly being formalised. Effective livelihoods support is likely to depend on coordinated interventions across a number of different sectors, but current geographic fragmentation of the programme presents an obstacle to integrated programming. The operational areas of different sectoral projects do not necessarily always overlap, this is partly because they are supported by different donors but also relates to the presence or absence of other agencies in different areas/sectors (see later). Logistical difficulties of access to south Sudan further complicate coordination of staff movements across different projects. There are a number of areas where several Save projects overlap e.g. parts of northern Bahr el Ghazal which arguably present an opportunity to pilot a more integrated approach to livelihoods support. However, this option is only likely to be feasible given continued peace and stability which would enable the establishment of more permanent field bases and allow more integrated planning and intervention at field level.

**Table 4: Project areas of operation**

Project	County	Project areas of involvement	Expansion potential areas	Potential contraction areas
Water and sanitation	Wau Gogrial, Aweil South, Aweil East Aweil west Aweil North Zeraf Island	Safe water supply. Hygiene and sanitation promotion. Community water management. Lobbying other agencies for taking action.	Development of national water policy. Sustainability and cost sharing. Understand north Sudan context. Expand technology options. WATSAN technical training & standards	
Education	Wau Gogrial Aweil East Aweil south Zeraf Island	Primary teacher training. Alternative education Policy and structure Development. Administration	Regional Teachers Training Institute Vocational training Child centred approach	
Child protection	Aweil south Gogrial Aweil East Aweil west Aweil North Bieh state Zeraf Island	Returning abductions Demobilized child soldier. Taking lead in monitoring Institutional policy development	Institutional development Labour and sexual abuse Alternative separation Psychosocial resilience issues exploration Juvenile justice Lead in CRC	
Livestock	Wau Gogrial, Aweil South,	Support with focus on women and children' Policy development within OLS Public health	Privatize drugs supply Continue within current areas of work	Withdraw from drugs supply or hand over to other INGOs

<sup>28</sup> The project provides water and sanitation facilities to selected of Save (UK) supported schools

		Support to local organizations/structures Lobby others to act Support to livestock economy		Integrate livestock into FSLH
Food security & livelihoods	Wau Gogrial Aweil East Aweil south Zeraf Bieh state	Agricultural support (seeds & tools). FSLH information Advocacy on targeting Emergency relief/PHSI	Policy development. Support to trade Global trends impact of trade on children. Incorporate agricultural training in school curriculum. Information systems Extractive industries Research into involvement of children in agricultural cycle. Impact of urbanization on livelihoods.	Distribution of seeds & tools and provision of emergency relief.
Cross cutting issues on all the projects		Participation. Promotion of child rights. Human rights monitoring. HIV/AIDS. Capacity building. Governance. Peace (building, education and context) Development of community based approaches. Diversity.		

The current funding environment is generally favourable presenting opportunities for overall expansion of the Save (UK) programme. However the extent to which future expansion of different sectoral projects can be effectively coordinated will depend largely on donor priorities and funding opportunities. A key challenge for the programme and its component sectoral projects is striking the right balance between consolidation of achievements in existing project areas and geographical expansion to new areas.

This is a particularly important issue for the WSS project. WSS activities tend to require a permanent technical presence on the ground to oversee construction activities and the continuous supply of materials and spare parts. As such there is a limit to the geographic area over which project staff and resources can be 'stretched' without a decrease in the quality and effectiveness of interventions. Any expansion of geographic scope therefore requires very careful assessment of possible trade-offs in existing areas and should only be considered with a concomitant increase in staff and resources.

The relative 'inelasticity' of the water project must also be a consideration in planned expansion of other sectors. In particular potential rapid expansion of the education programme in the near future has important implications for the water project if it is expected to continue to provide water and sanitation facilities to Save (UK) supported schools. Integrated needs assessment and joint planning is important to ensure further fragmentation of programme activities is avoided wherever possible.

### ***Inter-agency coordination***

Inter-agency coordination in the water sector is generally considered to be weak as compared to other sectors e.g. food security. The future role of UNICEF, which has assumed a coordinating role within the sector in recent years, is apparently under



review<sup>29</sup>. UNICEF originally provided IM2 pump sets to OLS agencies operating in south Sudan (including Save UK) but gradually phased out this support. It has subsequently focused its activities in a small number of pilot/project areas (Rumbek and Yambio counties), although it continues to provide spare parts to SRRRC WES for O&M in other areas<sup>30</sup>. Since it phased out input distribution and scaled down its operational role UNICEF has reportedly become less influential in terms of WES sector coordination. It should be noted however that WES activities account for a relatively small proportion of UNICEF's operation in south Sudan.

More recently UNICEF in collaboration with SRRRC has supported the development of a WES database for the whole of south Sudan. The database has been vastly improved since 2002 and now contains over 6500 records including information on location and type of water points, date of construction, depth, implementing agency etc. It is hoped that input of available data will be complete by the end of 2003. This is a significant achievement<sup>31</sup>. Although gradually improving, there remain some concerns over the quality of data provided by different agencies. However, the database represents an important first step in making WES agencies more accountable.

Information sharing is the key to effective coordination but the biggest challenge lies in making the information understandable and useful to implementing agencies operating on the ground. To-date NGO 'buy in' to the database idea has been limited<sup>32</sup>. Part of the problem is that it contains GPS shape files which SRRRC considers 'sensitive' and does not want shared outside UNICEF. As a result use of the database itself is restricted and NGOs must request information each time they need it. The first priority remains completing the basic dataset but the issue of how to make the database more accessible and user friendly once it is complete also needs to be addressed to secure greater 'buy in' from stakeholders.

The potential of the database as a tool for coordinated decision making in the water sector is enormous but it will not be fully realised unless SRRRC/UNICEF relinquish control over the data contained. Information sharing within the water sector needs to be decentralised as far as possible so that agencies on the ground and local authorities can also benefit.

Individual agencies like Save clearly have an important role to play in supporting and shaping such initiatives to ensure that their potential is maximised. It is therefore recommended that the Save WSS project 'leads by example' and strengthens its own procedures for M&E. It can thereby establish minimum standards for data collection and mapping and encourage other agencies operating in the sector to follow suite. It is equally important that the project is active in an advocacy role to ensure database outputs are useful to end users.

Important issues also surround the future status of EP&R (Emergency Preparedness and Response) under OLS. Oxfam currently has staff seconded to OLS. Save (UK) currently makes a major contribution in the food security sector by seconding staff to the TSU but is also looking at ways of contributing to and strengthening EP&R mechanisms across other sectors. Important questions surround the appropriateness of further technical support (e.g. TSU) versus the need for greater emphasis on inter-agency networking and advocacy at different levels. Defining the strategic contribution of the Save (UK)

---

<sup>29</sup> Roman Bautista pers comm.

<sup>30</sup> SRRRC WES teams interviewed reported that systems for supply of spare parts have broken down in many areas. UNICEF has agreements with county authorities to supply spares through SRRRC WES but there remains considerable confusion on the ground over respective roles and responsibilities and it often falls to NGOs to step in and fill the gaps.

<sup>31</sup> The FAO is also currently developing a 'dynamic atlas' for south Sudan which seeks to integrate information from a number of different sectors including WES.

<sup>32</sup> Gabriela Friedl pers comm.

programme to EP&R is clearly beyond the scope of this review but it potentially represents a useful entry point for the pursuit of higher level advocacy objectives in the water sector.

Emergency preparedness and contingency planning remains an area of weakness in the WSS project. The technical capacity of the Save (UK) WSS project for emergency WSS interventions is limited. Other agencies are equipped with mechanical rigs and mobile drilling teams capable of rapid response. The Save project generally assumes responsibility for emergency response within existing project locations and adjacent areas. However the project currently lacks a coherent contingency plan. Save project staff are currently awaiting training on EP&R from Oxfam which is the lead EP&R agency in the water sector. This is particularly important in order to enable effective contingency planning and budgeting, especially with respect to difficult areas such as Aweil North and Upper Nile where the project may be faced with the prospect of having to deal with large influxes of IDPs (see Section 4).

### ***Institutional capacity issues***

As noted above inter-agency coordination in the water sector is weak. This has been compounded by current uncertainty over the future of SRRC WES, the humanitarian counterpart for OLS WES sector agencies. It is generally understood that SRRC WES is likely to be dissolved at some point and responsibility for water sector development transferred to the emerging political administration. However important questions over how this might be achieved and how quickly, and the likely nature of new institutional arrangements for water remain unresolved.

These changes have important implications for all agencies working in the WES sector in south Sudan and need to be monitored carefully. The current uncertainty poses a number of immediate problems for agencies like Save (UK) and UNICEF which work with and through SRRC WES. The Save (UK) WSS project has been actively trying to build the capacity of SRRC WES teams at local level. The focus has been on building human capacity through training of individuals rather than transfer of resources to institutions which is controversial. Even if institutions change, well-trained individuals will naturally be sought after for incorporation within new structures. It is therefore recommended that this strategy of capacity building at local level be continued but it may need to be complimented by advocacy work to ensure emerging structures build and capitalise on these existing strengths.

A further major concern for OLS WES agencies is the current lack of any coherent policy framework to guide water sector development. Developing policies for management of water and other resources will be a key priority in the context of 'transition'. Policies will need to be negotiated at a number of different levels. There exists an opportunity for the Save (UK) WSS project to influence the development of rural water supply policy by documenting its current approach as a 'working model'. This needs to be combined with advocacy work at higher levels to ensure emerging policies are realistic and address actual needs and priorities on the ground. Linked to this is the need to develop effective procedures for sectoral planning and monitoring and coordinating the flow of resources into the sector. Save (UK) might therefore consider seconding someone to work with SRRC/UNICEF (or Ministry of Land and Natural Resources) in a combined capacity building/advocacy role.

Much depends on the outcome of the ongoing restructuring process. The functions of SRRC WES remain under review<sup>33</sup> and there is currently no obvious body at national level with which OLS WES agencies can engage. The continued absence of a sectoral representative at this level means that WES sector interests are unlikely to be fully

---

<sup>33</sup> National level functions were suspended around late 2002/early 2003?

represented within the new SPLM structure. Advocating for recognition of WES sector issues within SRRC/SPLM is therefore a key strategic priority for the Save (UK) project. Secondment of Save (UK) project staff is a possible entry point for building the capacity of sectoral stakeholders within SRRC/SPLM to exert pressure and lobby proactively for recognition of sectoral priorities in emerging policy processes. It also would enable more direct support to initiatives to coordinate development of sectoral policy. An important longer-term objective would be to build the capacity of emerging institutions to gradually take over responsibility for service provision from external agencies.

## 4. Approaches to difficult areas

The terms of reference for this review included providing advice on approaches to dealing with so-called 'difficult areas'. Two case study examples are examined below.

### 4.1 Aweil North

Unfortunately, due to the limited time available and logistical difficulties in gaining access to different parts of south Sudan it was not possible to visit Aweil North during this trip. Notes in this section are therefore based on information about the area derived from staff interviews and project reports. The aim is to reflect on issues facing the project drawing on experience of water supply development in similar contexts in other countries.

Aweil North<sup>34</sup> occupies the northernmost part of Bahr el Ghazal bordering south Kordofan to the north and southern Darfur to the north-west along the Kiir river which is the main passage between north and south. In the recent past Aweil North was one of the areas worst affected by raiding 'Mujhadeen' militias. However it has enjoyed relative stability for the past year or so due partly to the ongoing peace negotiations between SPLM/A and GoS but also significantly to the 'internal peace' between Dinka and Rizegat Arabs. Relative stability in northern Bahr el Ghazal has prompted a gradual return of refugees previously displaced to camps in northern and western Sudan. The ongoing conflict between GoS and the SLM/A in Western Sudan is an additional 'push' factor. While it is difficult to estimate the numbers involved the rate of return is clearly increasing. The trading town of Gok-Machar is an important gateway for passage between north and western Sudan and the south. Between January and November 2003; 10,471 and 17,610 IDPs were reported to have returned to Aweil West and North respectively. It is estimated 145,392 IDPs will return to both Counties if peace prevails<sup>35</sup>.

It is in this context that the WatSan project is intending to extend its activities to Aweil North and West. Initially it plans to provide water and sanitation services in support of 'transitional centres' which are being established to facilitate the return of abductees from northern Sudan. Funding has already been secured for this initiative (8 boreholes: 4 in Aweil North and 4 in Aweil West) in collaboration with the protection project. The main concern will be ensuring genuine stakeholder participation in the decision making process and establishing effective management structures. The project has a good track record in addressing these issues in existing project areas but the situation in Aweil North is complicated by large numbers of returnees. It is hoped that this initiative will provide an entry point for further future expansion of the water and sanitation project in these areas.

Any further future expansion of WSS activities will require more detailed analysis of the resource base and the feasibility of different technology options e.g. hand-drilling, hand-dug wells and rehabilitation/improvement of existing sources. Aweil North currently has relatively few perennial water sources<sup>36</sup> and rapid expansion of deep borehole drilling should not be undertaken without careful assessment of the likely impacts on the livelihoods of returnee and host populations. Effective integration of returnees into relatively under-utilised resource areas requires attention to the often delicate balance between exploitation of the natural resource base and livelihood sustainability/security.

Conflict in the Horn of Africa has caused massive displacement and loss of livelihoods for hundreds of thousands of people. Experience of integrating returnees in similar situations and environments elsewhere shows that water supply development can significantly

---

<sup>34</sup> Formerly part of Aweil West which was subdivided into Aweil North and Aweil West in 2001.

<sup>35</sup> Figures based on SRRC data

<sup>36</sup> Bol, 2003

affect patterns of population resettlement and also livelihood activities. In agro-pastoral communities in particular rapid increases in livestock numbers are common. Managing these changes to ensure they do not result in conflicts between users or degradation of surrounding natural resources is a key challenge. The box below summarises lessons drawn from a detailed study in the Gash-Barka region of Eritrea.

#### **Box 2: 'Returning thirsty' - lessons from Eritrea**

When Eritrea gained independence from Ethiopia many thousands of refugees began to return from Sudan and other countries, both under their own effort and as part of formalised programmes. Many of those returning from Sudan settled in the Gash-Barka region of Eritrea, an area characterised by low population density and relative availability of agricultural land but exceptionally few perennial water sources. As people began to resettle the government established a rapid borehole drilling programme. This served to encourage further resettlement and establishment of larger livestock populations leading to increasingly intensive exploitation of renewable natural resources in the area. A detailed study was undertaken to analyse the relationship between water supply and the return process and assess the future sustainability of livelihoods in the region, both for returnees and for the stayee population. The study draws a number of conclusions on integrating returnee populations into relatively under-utilised resource environments:

- Rapid development of boreholes had a significant impact on the types of water supplies being used by all communities with a shift away from traditional sources.
- High yielding boreholes contributed to rapidly increasing livestock numbers leading to significant changes in the surrounding natural environment
- Lack of effective policy and strategy to organise community management of new sources led to borehole failure forcing communities to resort to traditional sources
- Livelihood activities rely increasingly on motorised boreholes and demand for water can no longer be met by traditional sources leading to livelihood stress
- Lack of information about the nature and dynamics of groundwater resources means future sustainability of the resource base is uncertain.
- Borehole development has enabled population increase leading to increased pressure on fuel wood and other natural resources leading to increased costs
- Increased competition over natural resources (and uncertainty over future resource availability) combined with lack of alternative sources of livelihood threatens livelihood security, especially among the poorer groups.

Source: Kibreab & Nicol<sup>37</sup>

#### **Specific recommendations for Aweil North**

1. Survey current and future livelihood activities of host and returnee populations and likely demands these activities will have on water supplies.
2. Detailed analysis of the resource base and the feasibility of different technology options (including local knowledge and capacity to support increased abstraction in long term)
3. Document existing management structures and rules of access and use surrounding different water sources (especially pastoral vs agro-pastoral) and potential conflicts
4. Assess potential impact of water supply development on use of surrounding natural resources (pasture, fuelwood etc)

---

<sup>37</sup> Kibreab & Nicol (2002)

## 4.2 (Bieh State) Upper Nile

The consultation included a short visit to Pieri in Bieh State<sup>38</sup>, Eastern Upper Nile. The purpose of the visit was to undertake a rapid assessment of conditions on the ground, focusing particularly on the water and sanitation situation. Bieh State is one of a number of priority areas identified under OLS needs assessments. The situation in Pieri is typical of a number of areas in Upper Nile and as such provides a useful case study of the challenges involved in extension of the Save (UK) water project in this region.

Until recently large areas of Bieh State have been inaccessible to relief agencies due to continued insecurity. As a result the area is even more poorly served than other parts of the south - Upper Nile accounts for 30% of the population of south Sudan but just 7% of water points installed<sup>39</sup>. The security situation is improving gradually but while many parts of Upper Nile are now being cleared by OLS, small pockets of insecurity remain. Access is thus improved but maintaining a permanent presence on the ground is likely to remain difficult. Other agencies have experienced repeated problems of looting e.g. MSFB in Akobo and Oxfam in Motot. The history of internal conflict in this area suggests security is likely to remain a problem here despite wider peace and stability.

At the time of our visit Oxfam were preparing to move into Pieri. The team actually arrived with a rig on the plane we left on. Oxfam plans to drill 4 boreholes (Jockrial, Padwei, Gadwil, Peiri) based on prior detailed assessments in February and May 2003<sup>40</sup>. The Oxfam reports provide a detailed analysis of the water and sanitation situation in Pieri. The aim here is to summarise key thematic issues facing teams operating in areas like Upper Nile and suggest implications for the Save UK WSS project.

Acute water shortage is a prevailing characteristic of much of Bieh State. Water and sanitation has been consistently ranked as a high priority in OLS assessments and is further identified by agencies on the ground e.g. MedAir and MSF-B as a key constraint to progress in the areas of health and nutrition. There are very few existing/functioning water points and most of the population depends on seasonal ponds. In the dry season approximately 45%<sup>41</sup> of the population migrates to *toic* in search of water for the animals. The only people who remain are the young, the sick and the immobile and a handful of livestock. As surface water pools dry up the stayees rely entirely on a few remaining water points. In Pieri for example large numbers congregate around one borehole which is operated 24hrs. Access time is allocated to different villages according to a strict timetable in 1-2 hour slots overseen by village headmen. There are lots of disputes. Low rainfall last year meant surface water pools dried up more quickly than usual causing increased pressure on limited water points. Should any of these points breakdown during the dry season the results could be quite catastrophic.

Impacts on personal health and nutrition relate to both the quality and quantity of water consumed. Limited access leads to generally low consumption at household level. Rapid assessment suggests that except for the minority living in close proximity to water points average consumption is around 5l pcpd. This drops as low as 2-3l pcpd during the dry season. Water related diseases associated with drinking from surface water pools shared with animals are common, consistently ranking in the 'Top 5' in PHU records. These include malaria, respiratory problems, diarrhoeal disease, skin disease and STDs. Diarrhoeal disease moves up to rank 1 or 2 during the dry season (peak Jan-May) and includes both amoebic and bacillary dysentery. This in turn impacts on rates of malnutrition which remain acute averaging at or above 30%. Skin diseases and eye

---

<sup>38</sup> 'Bieh State' forms part of Central/Eastern Upper Nile. Although recently sub-divided into 5 counties: Nyirol, Waat, Wuror, Diror and Akobo, the area is still widely referred to as Bieh State.

<sup>39</sup> OLS WES database/Dynamic Atlas OLS southern sector

<sup>40</sup> Nandiga, B., May 27, 2003

<sup>41</sup> RASS estimate

infections, relating to poor personal hygiene and irregular washing, affect most children. MedAir reports that lack of access to water makes it very difficult to affect behavioural change through health education. The public health impact of limited availability of water is further exacerbated by congregation of people around water points in dry season. Large numbers of people in close proximity without adequate sanitation accelerates the spread of infectious disease.

Water shortage also impacts on livestock health. Water is critical not only for humans but also for the health of small stock (shoats). This in turn is closely related to child health and nutrition (milk yield). Traditionally young men migrated in search of water for livestock but now entire families are often forced to relocate due to water shortage. This forced migration in search of water has multiple impacts on food and livelihood security, health, and education. Young children are one of the groups worst affected. Child protection is a major issue in this area, abduction of women and children is common. Migration is dangerous and leaves people vulnerable to robbery and cattle raiding. The *toic* exposes children to wild animals (e.g. snakes) and disease (especially malaria, diarrhoea and guinea worm). Understanding the impact of conflict and displacement on traditional patterns of movement and resource use in this area is a key concern.

Water is predominantly collected by women and children, especially girls. Rapid assessment during group discussion at Pieri school showed that over 95% of children were engaged in water collection, totalling 4-5hrs per day. The school in Pieri is adjacent to the hand pump. The majority of children use multiple sources but all reportedly depend on the hand pump during the dry season. Approximately 20% (mostly those 7yrs and over, especially boys) were found to migrate to the *toic*. Schools generally close during this period. Of those questioned 50-60% claimed to have suffered from guinea worm and 100% had someone in their hh suffering from guinea worm - 'This is the home of guinea worm; people live with it, just like a headache'. While 80% use the latrine at school only 10 out of 60 have one at home.

Children were found to be familiar with the mantra of good hygiene and sanitation practices but very few could explain *why* this was important. Instead activities are simply conceived as 'good' and 'bad' behaviour. It should be noted that many prescribed practices are difficult to follow through due to lack of even the most basic utensils e.g. filter, cover, boil. As in most parts of south Sudan defecation is a taboo subject in this area. Nevertheless school remains a major entry point i.e. using children to reach adults through demonstration, but the current lack of women teachers and low female attendance remains a significant constraint.

### **Specific recommendations for Bieh State**

The people of Upper Nile face so many problems that it is very difficult to disaggregate those relating to water and sanitation. Many of the approaches to community-based water supply development established in other Save (UK) project areas will be difficult to apply in Upper Nile. Increasing water access is a major priority. Without basic improvements in education HSP is unlikely to be very effective. In many areas distribution of basic utensils, buckets, filter cloths etc will remain a high priority.

An essential starting point is detailed assessment of the resource base, existing sources and technology options for improvement including rehabilitation, hand dug wells and hand drilling. In many areas of Upper Nile the water table is too deep for Save UK's existing hand drilling technologies. Important questions surround the feasibility of commissioning other agencies to drill deep boreholes in such areas. Where this is the only option Save should consider forming a consortium with other agencies to coordinate commissioning of drillers as bulk contracts are more cost effective.

The rehabilitation of existing sources is a major issue. In Waural county for example 3 or the 6 existing boreholes are reportedly currently non-functioning. Systems for supply of tools and spare parts for O&M have largely broken down. In addition there are a number of old brick lined wells in the area. These are up to 50m deep and constructed in the 1950s most are presently non-functioning. Some of these were damaged by retreating troops and abandoned. In other areas people were displaced away from the wells during the fighting but are now returning and requesting assistance with rehabilitation. Rehabilitating deep wells is potentially dangerous and requires the right tools and expertise but is a potentially cost effective means of improving water access.

It is also important to investigate alternative technologies. Large quantities of surface water which are currently lost through evaporation could potentially be harnessed using haffirs<sup>42</sup> or berkets. Oxfam attempted to rehabilitate traditional haffirs and filtration wells in Motot but met with resistance. The population were reportedly reluctant to contribute labour and sceptical about the technology due to poor rains. A lot depends on the attitude of the local population. If Save (UK) is to operate in Upper Nile it needs to draw up a clear list of technology options it can offer. Also the benefits of open sources depend on good management e.g. fencing, keeping them clean, avoiding contamination by livestock or people bathing etc.

Management is a major problem in Upper Nile. Other agencies have found community involvement to be unsatisfactory<sup>43</sup>. The conflict has only just subsided very recently and there is no effective governance, no rules or regulations, no law enforcement. Large numbers of people using a few public sources means it is near impossible to define the user group and establish representative management structures. Furthermore people are continuously moving and many have been repeatedly displaced in recent years (e.g. large numbers are currently starting to return to Waural county from Malakal, Ethiopia, Akobo and Murrle area). Finally the capacity of SRRC WES (ex RASS) is extremely limited. The Waural county team were trained by UNICEF in pump O&M but otherwise have only limited technical expertise. They have very few tools and only occasional access to spare parts.

In most areas of Upper Nile WSS interventions will be in the form of 'hit and run' emergency response to acute WSS needs. Given the hydro-geological conditions important question surround whether Save (UK) has any comparative advantage in operating in this area.

---

<sup>42</sup> Possibly via a study visit to Save (UK) water project in Darfur where haffirs are well-established.

<sup>43</sup> Oxfam 2001



## 5. Conclusions and recommendations

The preceding text contains a number of recommendations on specific aspects of project activities. The main conclusions and recommendations can be summarised as follows:

13. WSS project interventions are likely to be most effective if conceptualised within the broader context of livelihoods. Water needs to be understood as a productive household asset and a key determinant of food and livelihood security. WSS interventions should be integral to any programme of livelihood support.
14. Livelihoods analysis suggests that the project needs to combine interventions at three broad levels: asset-based support; support to structures and processes; and promoting viability through advocacy. Such a framework provides a useful basis for planning project activities and the balance between interventions at different levels can be adjusted in response to changes in the operational context.
15. Specific recommendations fall into three categories: consolidation of basic asset-based support and extension to new areas; consolidation of support to structures and processes in existing areas; and development of a new strategy for networking and advocacy at higher levels.

### ***Consolidation of basic asset-based support and extension to new areas:***

16. Improve baseline information on water and livelihoods within Save (UK) project areas. Identify linkages between water availability, access and use and livelihood security. Adjust needs assessment and impact monitoring indicators accordingly.
17. Strengthen systems for M&E with a particular focus on the performance of different technologies i.e. frequency of breakdown, average annual maintenance cost etc. Save (UK) should lead by example, establish minimum standards and promote information sharing on issues of sustainability and cost-recovery.
18. Continuation and incremental extension of hand-drilling activities in areas where hydrogeology condition allow with greater emphasis on rehabilitation and operation and maintenance of existing water facilities. Continuation and extension of child-focused HSP activities. Active extension of support to well-digging activities as a low cost alternative technology aimed at wider coverage. Improve coordination among NGOs using contractors and investigate possibility of bulk contracts between NGO consortia and private sector operators.
19. Extension to new areas should only be considered with concomitant increase in project staff and resources. Existing staff are already 'stretched' too thinly and geographic concentration will be increasingly important in order to facilitate effective rehabilitation. The relative 'inelasticity' of the water project must be a consideration in planned expansion of activities in other sectors e.g. education.
20. Greater integration of WSS project indicators and processes of child-focused M&E with those of other projects. Gradual shift away from the current emphasis on discrete sectoral outputs towards a focus on livelihood outcomes within Save UK programme areas.
21. Emergency preparedness and contingency planning. Save (UK)'s comparative advantage in emergency response is limited to existing project locations and adjacent areas, but strengthening contingency planning is a key concern especially in areas where the project may be faced with the prospect of having to deal with large influxes of IDPs.

### ***Consolidation of support to structures and processes in existing areas:***

22. Training local authorities in identification of water needs and priorities and appropriate technology options. Building capacity to plan and articulate needs to higher levels. Decentralised mapping (payam-level) is a useful tool for participatory

planning and increasing transparency in decision-making over resource allocation within the sector.

23. Establish a 'working model' of rural water supply development in Save (UK) project areas for replication in other areas. Document the Save approach and rationale in a manual as a basis for capacity building and training and formation of a coherent policy on rural water supply. Focus on defining roles and responsibilities of different agencies and authorities and seek approval at regional and national levels.
24. It is suggested that the Save (UK) programme pilots a more integrated programme of livelihood support either in an area where it already has an established presence in a number of sectors e.g. Northern Bahr el Ghazal. This option is only likely to be feasible given continued peace and stability which would enable the establishment of more permanent field bases and allow more integrated planning and intervention at field level.

***Development of a new strategy for inter-agency networking and advocacy at higher levels:***

25. It is increasingly important that project work on the ground is complimented with higher level advocacy work to improve inter-agency coordination and to try and influence the development of emerging sectoral institutions and policies. Two possible approaches are identified below.
26. Extension of informal inter-agency networking activities. Save (UK) might take a lead in promoting 'good practice' agreements among agencies working in the water sector. Important issues surround the practicalities of coordination, sharing of information, and the formulation of policy on issues such as cost recovery.
27. Formal secondment of Save (UK) WSS staff to work with either OLS/UNICEF or SRRC/SPLM in a combined capacity building/advocacy role. Provide technical and strategic advice on the development and implementation of water policy, focusing in particular on building capacity for effective sectoral planning and resource allocation.

## References

- Bol, M. (2003) Aweil North Assessment Report, September 2003. Save UK south Sudan Water Supply and Sanitation Project.
- Collinson, S., with Bhatia, M., Evans, M., Fanthorpe, R., Goodhand, J., and Jackson, S. (2002) 'Politically informed humanitarian programming: using a political economy approach' Network Paper 41. Humanitarian Practice Network. London: Overseas Development Institute.
- Conway, T. & A. Norton (eds.) (2002) Poverty, Risk and Rights: New Directions in Social Protection. Development Policy Review 20 (5), November 2002. Overseas Development Institute.
- Conway, T., Moser, C., Norton, A. & J. Farrington (2002) Rights and livelihoods approaches: exploring policy dimensions. *Natural Resource Perspectives Number 78*, May 2002. ODI, London.
- Darcy, J. & C. Hofmann (2003) Rights-based approaches to humanitarian action: a challenge to humanitarian principles? HPG Briefing, Humanitarian Policy Group, London: ODI.
- Duff, B., Harding, A & V. Herringshaw (2003) Child Rights Programming: A Resource for Planning. Save the Children UK East and Central Africa.
- Huggins, C. (2001) External Evaluation, Bieh State Water and Sanitation Programme, Upper Nile Region. Oxfam Southern Sudan Programme.
- Kibreab, G & Nicol, A (2002) 'Returning Thirsty: water, livelihoods and returnees in the Gash-Barka region of Eritrea'. Water Policy Report No. 1. Water Policy Programme, ODI.
- Korf, B et al (2001) Livelihoods at Risk: Land Use and Coping Strategies of War-Affected Communities in Trincomalee District. Integrated Food Security Programme (IFSP), Trincomalee, Sri Lanka.
- Longley, C. & Maxwell, D. (2003) Livelihoods, Chronic Conflict and Humanitarian Response: A Synthesis of Current Practice. ODI Working Paper No. 182. Overseas Development Institute, London, April 2003.
- Macrae, J., Bradbury, M, Jaspars, S., Johnson, D. & M. Duffield (1997) Conflict, the Continuum and Chronic Emergencies: A critical analysis of the Scope for Linking Relief, Rehabilitation and Development Planning in Sudan. *Disasters* 21(3):223-43
- Oxfam (2003) Assessment Report for Water and Sanitation in Pieri. Nandiga, B., May 27, 2003.
- ODI (2003) SecureWater? Poverty, livelihoods and demand-responsive approaches. Water Policy Brief No. 4, January, 2003. ODI, London.
- Save (2002) Child Rights Programming. How to Apply Rights Based Approaches in Programming. A Handbook for Save the Children Alliance Members, March 2002.
- SC UK Hygiene and sanitation promotion: consultancy report. October, 2003.
- Slaymaker, T. & A. Nicol (2002) Save the Children (UK) south Sudan Programme: Water and Sanitation Project Evaluation. Water Policy Programme, Overseas Development Institute. May 2002
- World Bank (2003) Sudan Stabilisation and Reconstruction: Country Economic Memorandum. Main Text. Report No 24620-SU. Government of Sudan, World Bank